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EXAMINER

SAINT CYR, JEAN D

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/572,631	<b>Applicant(s)</b> TAKATORI, MASAHIRO	
	<b>Examiner</b> JEAN D. SAINT CYR	<b>Art Unit</b> 2425	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 29,30 and 32-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29,30 and 32-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Response to Amendment**

This action is in response to applicant's amendment filed on 08/12/2009. Claims 29-30, 32-56 are still pending in the current application. **This action is made FINAL.**

### **Response to Arguments**

Applicant's arguments were fully considered, but they were not persuasive. Applicant argues that the cited references did not disclose a module for DTV and a digital television set, wherein the module can connect decoders of devices common to respective countries with front-end circuits and CA modules which are made differently in the respective countries. Also, applicant argues that Hurst et al did not disclose interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing.

However, "a module for DTV and a digital television set, wherein the module can connect decoders of devices common to respective countries with front-end circuits and CA modules which are made differently in the respective countries" was not claimed.

But Guenebaud et al disclose in fig.1 an interface module presented that could be integrated into a digital television signal decoder, 0075 and that interface module has a plurality of slots for receiving different types of smart cards and that module includes a processor for executing the conditional access systems 11, 0059. And Borseth et al disclose a system containing a tuner that is capable of tuning to a wide range of frequencies allotted to different countries, col.5, lines 62-63; that means there is a DTV module capable of using a plurality of smart card having different characteristic and that is capable of decoding signals coming from different countries.

And Hurst et al show in see fig.2, dual buffer, where in the system includes a plurality of buffers for storing encoded video data representing images of video programs conveyed on a corresponding plurality of video channels. A processor initiates switching

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to decode a program conveyed on a selected one of the plurality of video channels in response to a user channel selection input,col.2, lines 30-39. That means the operation of those buffers is controlled a processor and that processor determines when to retrieve data from a buffer according to the input of the user. As a result, this action is made final.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29-30, 32-37, 39-41,43- 48, 49, 50-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guenebaud in view of Colman further in view of Borseth and further in view of Hurst, US. Pat. 6985188.

Re claim 29, Guenebaud et al disclose digital television receiver module for use in a digital television receiver for receiving a digital television signal (see fig.1; the interface module presented here could be integrated into a digital television signal decoder, 0075), comprising:

a first connecting device having a plurality of terminals for electrically connecting to one external substrate among external substrates which can receive digital television signals of broadcasting systems different from each other (see fig.1, interface module 1 having a plurality of slots for receiving smart cards);

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a decoding device for executing a decoding processing on a digital television signal inputted from a demodulator provided on said external substrate via said first connecting device, so as to convert the digital television signal into a video signal and an audio signal, and for outputting the video signal and audio signal via said first connecting device (the use of decoders capable of receiving signals corresponding to television programs and of transmitting them to a television set after processing into an intelligible format, 0005);

a control device for controlling an operation of said digital television receiver module; and an interface device which is connected to one conditional access module among a plurality of types of conditional access modules having electrical specifications different from each other via said first connecting device, and which is connected to said demodulator, said decoding device, and said control device, said interface device executing input and output processing on a plurality of signals communicated among said demodulator, said conditional access module, said decoding device, and said control device (The processing means 9 preferably include a processor for executing the conditional access systems 11, 0059);

But Guenebaud et al did not disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality of signals communicated via said first connecting device, so as to conform to electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module;

said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing.

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However, Colman et al disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality of signals communicated via said first connecting device(the security device includes a conditional access card 22 to support the security function for conditional access. By replacement of different conditional access cards , the security device 18 can be upgraded over time with minimal impact to the set-top. Different conditional access cards 22 can be inserted into the security device 18 to gain access to different programs, 0012).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Colman into the invention of Guenebaud for the purpose of modifying the electrical connection of the conditional access whenever a new card is selected.

And Borseth et al disclose so as to conform to electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module(the multimedia application includes a modular arrangement of pluggable components known as "filters" which are connected together at interface points known as "pins; a typical transform filter has one input pin and one output pin. A source filter has one output pin for each data stream and a destination filter has one input pin, col.5, lines 30-42; the tuner is capable of tuning to a wide range of frequencies allotted to different countries, col.5, lines 62-63.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Borseth into the invention of Guenebaud as modified by Colman for the purpose of allowing the system to receive program from different countries.

And Hurst et al disclose said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing(see fig.2, dual buffer, The system includes a plurality of buffers for storing encoded video data representing images of video programs conveyed on a corresponding plurality of video channels. A processor initiates switching to decode a program conveyed on a selected one of the plurality of video channels in response to a user channel selection input,col.2, lines 30-39).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Hurst into the invention of Guenebaud as modified by Colman and Borseth for the purpose of controlling the operation of the buffers in using a switching system.

Re claim 30, Guenebaud et al disclose wherein said interface device outputs a digital television signal inputted from said demodulator to said decoding device and said conditional access module via said first connecting device (As illustrated in FIG. 1, in an exemplary digital television application, the interface module 1 is integrated into a decoder constituting host 2. Host 2 is in turn connected to a television set 3 adapted to display the user's programs, 0046).

Re claim 32, Guenebaud et al disclose wherein, when said conditional access module is not connected to said control device via said first connecting device, said control device controls said interface device so that a detection signal from said conditional access module is outputted to said control device (The processing means 9 preferably include a processor for executing the conditional access systems 11, 0059).

Re claim 33, Guenebaud et al disclose wherein, when a first type conditional access module among said plurality of types of conditional access modules is connected to said control device via said first connecting device, said control device controls said interface device so that a digital television signal inputted from said connected conditional access

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module via said first connecting device is outputted to said decoding device (see fig.2 where the output one of the plurality of conditional access is connected to the processor and that processor is outputted to the decoding device).

Re claim 34, Guenebaud et al did not disclose wherein said control device outputs a first power-supply voltage to said connected conditional access module via said first connecting device, and controls said interface device so that an address signal and a data signal from said control device are outputted to said connected conditional access module via said first connecting device on the first power-supply voltage.

However, Colman et al disclose providing a control signal to a switch, and providing a switched voltage to a receiving unit in the security device based on the selection signal from the controller, 0010; a card interface 20 connects to the conditional access card 22 in the security device 18 for sensing the insertion of a card 22 and identifying a bias voltage request of the conditional access card 22, 0013.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Colman into the system of Guenebaud as modified by Borseth and Hurst for the purpose of allowing the power-supply to modify its output according to the conditional access connected to it.

Re claim 35, Guenebaud et al disclose wherein said first type conditional access module is a conditional access module of a Common Interface (the CI type, common interface, for the DVB standard, 0086).

Re claim 36, is met as previously discussed with respect to claim 34.

Re claim 37, Guenebaud et al disclose wherein, in such an operating state that is after the initial state that said second type conditional access module among said plurality of types of conditional access modules is connected to said control device via said first



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connecting device, said control device controls said interface device, so that a clock signal inputted from said connected conditional access module via said first connecting device is outputted to said decoding device, a control signal inputted from said demodulator via said first connecting device is outputted to said connected conditional access module via said first connecting device, and a control signal inputted from said connected conditional access module via said first connecting device is outputted to said demodulator via said first connecting device (see fig.2, where the output one of the plurality of conditional access is connected to the processor and that processor is outputted to the decoding device).

Re claim 39, Guenebaud et al disclose further comprising a further interface device for connecting a third type conditional access module to said interface device and said control device (see fig.1 where any of the plurality of conditional access can be connected to the common interface module 1).

Re claim 40, Guenebaud et al disclose wherein said third type conditional access module is a conditional access module of an IC Card (see fig.1, IC card).

Re claim 41, Guenebaud et al disclose further comprising a device for selectively switching over between: a first state that said first connecting device is connected to said interface device; and a second state that said first connecting device is connected to said further interface device (the processor perform a dialogue with host 2 according to its parameters, 0064; that means the processor interacts with the interface device according to its status).

Re claim 43, Guenebaud et al disclose wherein, via said first connecting device, said digital television receiver module can connect to one of the following: a first type external substrate conforming to a first broadcasting system, and comprising a first type demodulator and a second connecting device which can connect said first type conditional access module thereto (see fig.1, element 5, chip card; the processing

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means process information coming from host 2 by using a particular conditional access system. It will be the conditional access system 11 that corresponds to the authorization means 7 identified by the identification means 8, 0066); and

a second type external substrate conforming to a second broadcasting system , and comprising a second type demodulator and a second connecting device which can connect said second type conditional access module thereto (the user holds a plurality of chip cards 5 or other authorization means 7, he will be enabled to access those programs for which he has access rights without worrying about the chip card reader 6 into which he inserts the chip card, and without worrying about any other selection, 0074; the processing means process information coming from host 2 by using a particular conditional access system. It will be the conditional access system 11 that corresponds to the authorization means 7 identified by the identification means 8, 0066).

Re claim 44, Guenebaud et al disclose wherein said control device detects a type of said external substrate and a broadcasting system of the inputted digital television signal, based on a type-identifying data signal inputted from said external substrate via said first connecting device, and wherein, based on a detected broadcasting system, said control device controls an operation of said decoding device and switches over among the types of the signals communicated via said first connecting device so as to control said interface device (the processor perform a dialogue with host 2 according to its parameters, 0064).

Re claim 45, Guenebaud et al did not disclose wherein the type-identifying data signal is generated so as to differ depending on the type of said external substrate, by connecting or not connecting said external substrate to a ground conductor.

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However, Colman et al disclose a card interface 20 connects to the conditional access card 22 in the security device 18 for sensing the insertion of a card 22 and identifying a bias voltage request of the conditional access card 22, 0013.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Colman into the system of Guenebaud as modified by Borseth and Hurst for the purpose of allowing the system to identify data signal according to external substrate connected to a ground conductor.

Re claim 46, Guenebaud et al explicitly disclose wherein the type-identifying data signal is a signal of read-out data which is obtained by reading out data stored in a memory mounted on said external substrate so as to differ depending on the type of said external substrate (the processing means 9 will use a specific conditional access system 11 stored in the storing means 10, 0071).

Re claim 47, Guenebaud et al explicitly disclose wherein the broadcasting system includes at least one of DVB-T system, ATSC system and ISDB-T system (the entire method could run via a standard interface of the CI type for the DVB standard, 0086).

Re claim 48, Guenebaud et al explicitly disclose further comprising a third connecting device for connecting a plurality of types of function expansion substrates, said plurality of types of function expansion substrates having functions different from each other to expand a function of said digital television receiver module (see fig.1, element 2, digital television decoder or cable modem).

Re claim 49, Guenebaud et al explicitly disclose wherein said function expansion substrates include at least one of a network function expansion board for connection to a network, and a CATV modem function expansion board for connection to a head end of a CATV (see fig.1, satellite network).

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Re claim 50, Guenebaud et al explicitly disclose digital television receiver module and an external substrate, wherein said digital television receiver comprises: a first connecting device having a plurality of terminals for electrically connecting to one external substrate among external substrates which can receive digital television signals of broadcasting systems different from each other (see fig.1, interface module 1);

a decoding device for executing a decoding processing on a digital television signal inputted from a demodulator provided on said external substrate via said first connecting device, so as to convert the digital television signal into a video signal and an audio signal, and for outputting the video signal and audio signal via said first connecting device (the use of decoders capable of receiving signals corresponding to television programs and of transmitting them to a television set after processing into an intelligible format, 0005);

a control device for controlling an operation of said digital television receiver module; and an interface device which is connected to one conditional access module among a plurality of types of conditional access modules having electrical specifications different from each other via said first connecting device, and which is connected to said demodulator, said decoding device, and said control device, said interface device executing input and output processing on a plurality of signals communicated among said demodulator, said conditional access module, said decoding device, and said control device (The processing means 9 preferably include a processor for executing the conditional access systems 11, 0059);

wherein said external substrate comprises: a first type demodulator; and a second connecting device for connecting a first type conditional access module thereto (see fig.1, element 5, chip card), and

wherein said external substrate is a first type external substrate conforming to a first

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broadcasting system (the processing means process information coming from host 2 by using a particular conditional access system, 0066).

But Guenebaud et al did not disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality of signals communicated via said first connecting device, so as to conform to electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module, and said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing.

However, Colman et al disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality of signals communicated via said first connecting device(the security device includes a conditional access card 22 to support the security function for conditional access. By replacement of different conditional access cards , the security device 18 can be upgraded over time with minimal impact to the set-top. Different conditional access cards 22 can be inserted into the security device 18 to gain access to different programs, 0012).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Colman into the invention of Guenebaud for the purpose of modifying the electrical connection of the conditional access whenever a new card is selected.

And Borseth et al disclose so as to conform to electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module(the multimedia application includes a modular arrangement of pluggable

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components known as "filters" which are connected together at interface points known as "pins; a typical transform filter has one input pin and one output pin. A source filter has one output pin for each data stream and a destination filter has one input pin, col.5, lines 30-42; the tuner is capable of tuning to a wide range of frequencies allotted to different countries, col.5, lines 62-63.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Borseth into the invention of Guenebaud as modified by Colman for the purpose of allowing the system to receive program from different countries.

And Hurst et al disclose said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing(see fig.2, dual buffer, The system includes a plurality of buffers for storing encoded video data representing images of video programs conveyed on a corresponding plurality of video channels. A processor initiates switching to decode a program conveyed on a selected one of the plurality of video channels in response to a user channel selection input,col.2, lines 30-39).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Hurst into the invention of Guenebaud as modified by Colman and Borseth for the purpose of controlling the operation of the buffers in using a switching system.

Re claim 51, Guenebaud et al explicitly disclose a digital television receiver for receiving a digital television signal comprising a digital television receiver module and an external substrate ,wherein said digital television receiver comprises: a first connecting device having a plurality of terminals for electrically connecting to one external substrate among external substrates which can receive digital television signals of broadcasting systems different from each other(see fig.1, interface module 1; the

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interface module presented here could be integrated into a digital television signal decoder, 0075);

a decoding device for executing a decoding processing on a digital television signal inputted from a demodulator provided on said external substrate via said first connecting device, so as to convert the digital television signal into a video signal and an audio signal, and for outputting the video signal and audio signal via said first connecting device (the use of decoders capable of receiving signals corresponding to television programs and of transmitting them to a television set after processing into an intelligible format, 0005);

a control device for controlling an operation of said digital television receiver module; an interface device which is connected to one conditional access module among a plurality of types of conditional access modules having electrical specifications different from each other via said first connecting device, and which is connected to said demodulator, said decoding device, and said control device, said interface device executing input and output processing on a plurality of signals communicated among said demodulator, said conditional access module, said decoding device, and said control device (The processing means 9 preferably include a processor for executing the conditional access systems 11, 0059; that means the processor is responsible to connect at least one of the plurality of conditional access modules to the common interface module 1); and

a third connecting device for connecting a plurality of types of function expansion substrates, said plurality of types of function expansion substrates having functions different from each other to expand a function of said digital television receiver module(see fig.1, a plurality of slots),

wherein said external substrate comprises: a first type demodulator; and a second

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connecting device for connecting a first type conditional access module thereto(see fig.1, element 5, chip card),

wherein said external substrate is a first type external substrate conforming to a first broadcasting system, and wherein said digital television receiver module further comprises a first type said function expansion substrate (the processing means process information coming from host 2 by using a particular conditional access system, 0066).

But Guenebaud et al did not disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality of signals communicated via said first connecting device, so as to conform to electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module, and said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing.

However, Colman et al disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality of signals communicated via said first connecting device(the security device includes a conditional access card 22 to support the security function for conditional access. By replacement of different conditional access cards , the security device 18 can be upgraded over time with minimal impact to the set-top. Different conditional access cards 22 can be inserted into the security device 18 to gain access to different programs, 0012).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Colman into the invention of Guenebaud for the purpose of modifying the electrical connection of the conditional access whenever a new card is selected.



And Borseth et al disclose so as to conform to electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module(the multimedia application includes a modular arrangement of pluggable components known as "filters" which are connected together at interface points known as "pins; a typical transform filter has one input pin and one output pin. A source filter has one output pin for each data stream and a destination filter has one input pin, col.5, lines 30-42; the tuner is capable of tuning to a wide range of frequencies allotted to different countries, col.5, lines 62-63.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Borseth into the invention of Guenebaud as modified by Colman for the purpose of allowing the system to receive program from different countries.

And Hurst et al disclose said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing(see fig.2, dual buffer, The system includes a plurality of buffers for storing encoded video data representing images of video programs conveyed on a corresponding plurality of video channels. A processor initiates switching to decode a program conveyed on a selected one of the plurality of video channels in response to a user channel selection input,col.2, lines 30-39).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Hurst into the invention of Guenebaud as modified by Colman and Borseth for the purpose of controlling the operation of the buffers in using a switching system.

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Re claim 52, Guenebaud et al explicitly disclose wherein said external substrate includes a plurality of circuits corresponding to a plurality of types of display devices different from each other, respectively, and wherein said external substrate further comprises one of a plurality of types of display interfaces for outputting video signal and audio signal outputted from said digital television receiver module to said display devices (see fig.1; Host 2 is in turn connected to a television set 3 adapted to display the user's programs, 0046).

Re claim 53, Guenebaud et al explicitly disclose wherein each of said display devices is one of a liquid crystal display, a plasma display and a CRT display (see fig.1, element 3, a display television).

Re claim 54, Guenebaud et al explicitly disclose a digital television receiver for receiving a digital television signal comprising a digital television receiver module and an external substrate wherein said digital television receiver comprises (see fig.1; the interface module presented here could be integrated into a digital television signal decoder, 0075),

a first connecting device having a plurality of terminals for electrically connecting to one external substrate among external substrates which can receive digital television signals of broadcasting systems different from each other (see fig.1, interface module 1);

a decoding device for executing a decoding processing on a digital television signal inputted from a demodulator provided on said external substrate via said first connecting device, so as to convert the digital television signal into a video signal and an audio signal, and for outputting the video signal and audio signal via said first connecting device (the use of decoders capable of receiving signals corresponding to television programs and of transmitting them to a television set after processing into an intelligible format, 0005);

a control device for controlling an operation of said digital television receiver module;  
an interface device which is connected to one conditional access module among a plurality of types of conditional access modules having electrical specifications different from each other via said first connecting device, and which is connected to said demodulator, said decoding device, and said control device, said interface device executing input and output processing on a plurality of signals communicated among said demodulator, said conditional access module, said decoding device, and said control device (The processing means 9 preferably include a processor for executing the conditional access systems 11, 0059; that means the processor is responsible to connect at least one of the plurality of conditional access modules to the common interface module 1); and

a third connecting device for connecting a plurality of types of function expansion substrates, said plurality of types of function expansion substrates having functions different from each other to expand a function of said digital television receiver module (see fig.1, a plurality of slots),

wherein said external substrate comprises: a first type demodulator; a second connecting device for connecting a first type conditional access module thereto(see fig.1, element 5, chip card);

and a first type display interface for connecting a first type display thereto, wherein said external substrate conforms to a first broadcasting system (the processing means process information coming from host 2 by using a particular conditional access system, 0066) and is a first type external substrate connected to said first type display device(see fig.1).

But Guenebaud et al did not disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality

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of signals communicated via said first connecting device, so as to conform to electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module, and said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing.

However, Colman et al disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality of signals communicated via said first connecting device(the security device includes a conditional access card 22 to support the security function for conditional access. By replacement of different conditional access cards , the security device 18 can be upgraded over time with minimal impact to the set-top. Different conditional access cards 22 can be inserted into the security device 18 to gain access to different programs, 0012).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Colman into the invention of Guenebaud for the purpose of modifying the electrical connection of the conditional access whenever a new card is selected.

And Borseth et al disclose so as to conform to electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module(the multimedia application includes a modular arrangement of pluggable components known as "filters" which are connected together at interface points known as "pins; a typical transform filter has one input pin and one output pin. A source filter has one output pin for each data stream and a destination filter has one input pin, col.5, lines 30-42; the tuner is capable of tuning to a wide range of frequencies allotted to different countries, col.5, lines 62-63.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Borseth into the invention of Guenebaud as modified by Colman for the purpose of allowing the system to receive program from different countries.

And Hurst et al disclose said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing(see fig.2, dual buffer, The system includes a plurality of buffers for storing encoded video data representing images of video programs conveyed on a corresponding plurality of video channels. A processor initiates switching to decode a program conveyed on a selected one of the plurality of video channels in response to a user channel selection input,col.2, lines 30-39).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Hurst into the invention of Guenebaud as modified by Colman and Borseth for the purpose of controlling the operation of the buffers in using a switching system.

Re claim 55, Guenebaud et al explicitly disclose digital television receiver for receiving a digital television signal comprising a digital television receiver module and an external substrate , wherein said digital television receiver comprises: a first connecting device having a plurality of terminals for electrically connecting to one external substrate among external substrates which can receive digital television signals of broadcasting systems different from each other(see fig.1; the interface module presented here could be integrated into a digital television signal decoder, 0075; see fig.1, interface module 1);

a decoding device for executing a decoding processing on a digital television signal inputted from a demodulator provided on said external substrate via said first

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connecting device, so as to convert the digital television signal into a video signal and an audio signal, and for outputting the video signal and audio signal via said first connecting device (the use of decoders capable of receiving signals corresponding to television programs and of transmitting them to a television set after processing into an intelligible format, 0005),

a control device for controlling an operation of said digital television receiver module; and an interface device which is connected to one conditional access module among a plurality of types of conditional access modules having electrical specifications different from each other via said first connecting device, and which is connected to said demodulator, said decoding device, and said control device, said interface device executing input and output processing on a plurality of signals communicated among said demodulator, said conditional access module, said decoding device, and said control device (The processing means 9 preferably include a processor for executing the conditional access systems 11, 0059; that means the processor is responsible to connect at least one of the plurality of conditional access modules to the common interface module 1);

wherein said external substrate comprises: a first type demodulator; a second connecting device for connecting a first type conditional access module thereto; and a first type display interface for connecting a first type display thereto, wherein said external substrate conforms to a first broadcasting system and is a first type external substrate connected to said first type display device, and wherein said digital television receiver module further comprises a first type said function expansion substrate (see fig.1, element 5, chip card; the processing means process information coming from host 2 by using a particular conditional access system, 0066).

But Guenebaud et al did not disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality of signals communicated via said first connecting device, so as to conform to

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electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module, and said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing.

However, Colman et al disclose wherein said control device controls said interface device by changing types and electrical specifications of at least one signal of a plurality of signals communicated via said first connecting device(the security device includes a conditional access card 22 to support the security function for conditional access. By replacement of different conditional access cards , the security device 18 can be upgraded over time with minimal impact to the set-top. Different conditional access cards 22 can be inserted into the security device 18 to gain access to different programs, 0012).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Colman into the invention of Guenebaud for the purpose of modifying the electrical connection of the conditional access whenever a new card is selected.

And Borseth et al disclose so as to conform to electrical specifications of a connected conditional access module, in response to at least one of a broadcasting system of an inputted digital television signal and a type of said connected conditional access module(the multimedia application includes a modular arrangement of pluggable components known as "filters" which are connected together at interface points known as "pins; a typical transform filter has one input pin and one output pin. A source filter has one output pin for each data stream and a destination filter has one input pin, col.5, lines 30-42; the tuner is capable of tuning to a wide range of frequencies allotted to different countries, col.5, lines 62-63.

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It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Borseth into the invention of Guenebaud as modified by Colman for the purpose of allowing the system to receive program from different countries.

And Hurst et al disclose said interface device comprises a plurality of buffers, and wherein said control device controls on-off states of respective buffers so as to control the input and output processing(see fig.2, dual buffer, The system includes a plurality of buffers for storing encoded video data representing images of video programs conveyed on a corresponding plurality of video channels. A processor initiates switching to decode a program conveyed on a selected one of the plurality of video channels in response to a user channel selection input,col.2, lines 30-39).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Hurst into the invention of Guenebaud as modified by Colman and Borseth for the purpose of controlling the operation of the buffers in using a switching system.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guenebaud et al in view of Colman et al further in view of Borseth and further in view of Hurst and further in view of Candelore, US No. 20040228175.

Re claim 38, Guenebaud et al did not explicitly disclose wherein said second type conditional access module is a conditional access module of a cable CARD.

However, Candelore et al disclose wherein said second type conditional access module is a conditional access module of a cable CARD (see fig.1, cable card).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Candelore into the invention of



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Guenebaud as modified by Colman and Borseth and Hurst for the purpose of allowing user to receive signal from a specific provider according to the cable card that is selected.

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guenebaud in view of Colman further in view of Borseth and further in view of Hurst and further in view of Jensen et al US No. 6603080.

Re claim 42, Guenebaud et al did not disclose wherein said digital television receiver module comprises a substrate having a plurality of layers, and wherein a capacitor layer substrate on which a plurality of thin-film capacitors are mounted and a resistance layer substrate on which a plurality of thin-film resistances are mounted, are sandwiched between a first signal wiring layer substrate and a second signal wiring layer substrate.

However, Jensen et al disclose a circuit board 10 of the present invention can be a multi-layer circuit board. Such a circuit board 10 can have a plurality of substrates, insulating layers 14, ferrite containing layers 18, and captivating layers 20. A single transmission layer 14 or line 34 can accordingly, have more than one ferrite containing layer 18 nearby to absorb interfering electromagnetic signals known as electromagnetic interference, col.5, lines 32-39.

It would have been obvious for any person of ordinary skill in the art at that time the invention was to introduce circuit board with a plurality of layers into the system of Guenebaud in view of Colman further in view of Borseth and further in view of Hurst and further in view of Jensen for the purpose of reducing space and interferences among circuits.

Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guenebaud in view of Colman further in view of Borseth and further in view of Hurst and further in view of Sengupta et al US No. 20040228175.

Re claim 56, Guenebaud et al did not explicitly disclose wherein said digital television receiver module is formed by a first dielectric substrate, wherein said external substrate is formed by a second dielectric substrate, and wherein a dielectric constant of said second dielectric substrate is larger than a dielectric constant of said first dielectric substrate.

However, Sengupta et al disclose having a second dielectric constant greater than the first dielectric constant, and first and second electrodes positioned on a surface of the tunable dielectric layer opposite the generally planar surface of the substrate. The first and second electrodes are separated to form a gap there between, 0010.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to introduce first dielectric and second dielectric in the system of Guenebaud in view of Colman further in view of Borseth and further in view of Hurst, as taught by Sengupta, for the purpose of separating layers efficiently.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Duclos Saintcyr whose phone number is 571-270-3224. The examiner can normally reach on M-F 7:30-5:00 PM EST. If attempts to reach the examiner by telephone are not successful, his supervisor, Brian Pendleton, can be reached on 571-272-7527. The fax number for the organization where the application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free). If you would like assistance from a USPTO Customer Service Representative or access to the

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automated information system, dial 800-786-9199(IN USA OR CANADA) or 571-272-1000.

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